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(71) Applicant (for all designated States except US): **CARL ZEISS SMT AG** [DE/DE]; Carl-Zeiss-Strasse 22, 73447 Oberkochen (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SCHUSTER, Karl-Heinz** [DE/DE]; Rechbergstrasse 24, 89551 Königsbronn (DE).

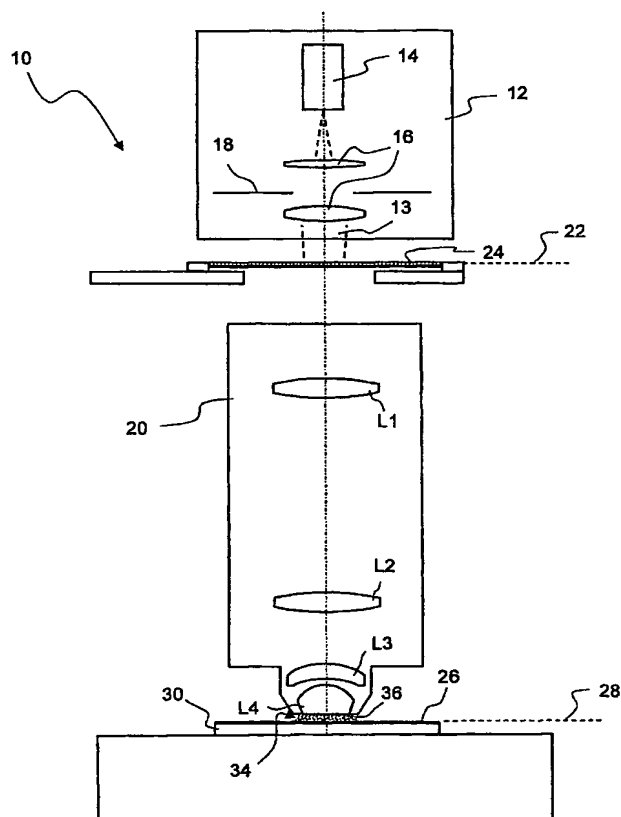
(74) Agents: **SCHWANHÄUSSER, Gernot et al.**; Ostertag & Partner, Eibenweg 10, 70597 Stuttgart (DE).

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(54) Title: MICROLITHOGRAPHIC PROJECTION EXPOSURE APPARATUS AND IMMERSION LIQUID THEREFORE



(57) Abstract: An immersion liquid for a microlithographic projection exposure apparatus is enriched with heavy isotopes. This reduces the chemical reactivity, which leads to an extension of the lifetime of optical elements which come in contact with the immersion liquid. For example, heavy water (D₂O), deuterated sulfuric acid, (D₂SO₄) or deuterated phosphoric acid D₃P¹⁶O₄ may be used. Organic compounds such as perfluoro polyethers, which have been deuterated or enriched with heavy oxygen (¹⁸O), are furthermore suitable.



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